



Make the most of Broadband

We all know that broadband internet access is fast, but that's just the start of the story. Mike Bedford tackles 12 projects that will have you using broadband in ways that you never thought possible

There's much more to broadband than just increased speed. It's a whole new way of using the internet, for two simple reasons: broadband is very fast, and it's always on. Take a look in this month's *Learn* section for example – we show you how to log on to your Media Center and record TV programmes from anywhere in the world. And if that doesn't impress you, we've got lots more. Here we reveal precisely what it is that makes broadband so desirable.

This is the third in a series of features we've run about broadband, but don't worry if you've come in late. The other two articles, a guide to broadband deals and a beginner's guide to home networking, are on this month's cover disc.

THE BENEFITS

With broadband, you need never disconnect your PC from the internet. Emails pop up onscreen as

soon as they arrive. You can immediately check facts on the internet without waiting for your PC to dial in to your ISP. This ease of use allows you to use the web for all sorts of things you might not have considered before. For example, you could throw away that TV guide and go to www.tvtv.co.uk to find out what's on instead. Need to know what a word means? Type define: followed by the word into Google and you'll get the answer in seconds. Using broadband doesn't tie up your phone line, either. By sharing a broadband connection between a collection of PCs over a home network, the entire family can be online at the same time.

The speed of broadband means that pages open more or less instantly, but you can use this speed for more than faster browsing; you can access content that would have taken a lifetime to download on a dial-up connection. There are websites designed solely for broadband

users, such as www.bbc.co.uk/broadband and www.harrypotter.com, which are packed full of video and multimedia content. Downloading music and software becomes a realistic proposition, too. MP3 tracks can be on your hard disk in a minute rather than 20, and that 80MB software upgrade won't tie up your PC for hours.

As an alternative to downloading music, how about using an online music store as a massive on-demand jukebox? Read our feature about online music stores on page 227 for more details.

Over the next few pages you'll find a range of projects that would be impractical or impossible over a dial-up connection, but which a broadband connection makes easy. Because details differ from one product or service to another we can't provide step-by-step instructions, but we'll give you some useful hints and tips in the hope that you'll be inspired to try out some of these projects yourself. ☺



PROJECT 1

GET INTO ONLINE GAMING

Whether you're chatting with an ogre or fragging a space marine, games are so much more fun when you play them with other people. Online gaming is possible over a dial-up connection, but bandwidth limitations mean you'll always be one step behind.

Once you've installed an online game on your PC, you're presented with a list of servers, or realms as they're also called, each of which represents a different online community that uses the game. Some servers are run by the game publisher and others by third parties, although certain games – mostly first-person shooters and strategy games – allow you to set up your own server so you can have a private game with your friends.

First-timers should pick an existing server, making sure that it's an English-speaking one. Many of the servers are free to join, but some of the more popular role-playing games have a monthly charge in addition to the price of the software. World of Warcraft, for example, costs \$15 (around £9) per month, although it's cheaper if you sign up for more than a month at a time.

Gamers are often attracted by the concept of an online community of like-minded individuals. Many games let you converse with other players during the course of play, but if you really want to become a part of the gaming community you can join chat forums to share your passion with others.

So what should you look for if you fancy getting in on the act? World of Warcraft is well respected among role-playing enthusiasts for its impressive graphics and has over four million players worldwide, while the Everquest games continue to be extremely popular. If you're looking for some shoot-'em-up action, Counter-Strike Source has a very healthy following, and if strategy is more your thing, Warhammer 3 continues to be popular, although Warhammer 40000 Dawn of War is starting to attract some serious attention.

Online gaming doesn't always involve competing with others, though. If you fancy a bit of solitary gaming, all you need is a broadband connection and a web browser to play games that use Shockwave and Javascript plug-ins – and many of them are free. Take a look, for example, at www.unlimitedwebgames.com and



www.candystand.com. Many of these games are not especially demanding of bandwidth but if you're pitting your wits against a computer at chess you really need that always-on connection.

If you find that a game's appeal soon wears off and you're always hankering after the latest and greatest releases, perhaps renting games would suit you better than buying them. To get some idea of what's on offer go to <http://gamesondemand.yahoo.com>. Access to any three games costs you \$10 (around £6) a month, and for \$15 a month you get unlimited access to the full library of over 100 games.



PROJECT 2

HOST A WEBCAM

Although you might derive some satisfaction from setting up a webcam that shows the world the contents of your fridge, there are also some genuinely useful reasons to host one. If you set a webcam up in your home you can keep an eye on it while you're at work or even check it out from the other side of the world when you're on holiday.

There are two types of webcam. A USB camera connects to your PC through a USB port and costs only a few pounds. If you want to use one of these to keep an eye on your possessions from the beach in Spain, however, you'll need to keep your PC running and get hold of some surveillance software and web space. You probably have the web space already, as most ISPs offer free space with your account. You can set software on your PC to upload a new image from the webcam to your web page over FTP every few seconds. This isn't quite as slick as a live video feed but it

doesn't require any special features from your web hosting company. You may even find that the software you need for this is included with your webcam, but if not there are plenty of alternatives – check out www.easyfreewebcam.com for a decent, free example.

Alternatively, you could dispense with all the hassle and get an IP camera. These are more expensive – a basic model will set you back around £100 – but they have the advantage that your PC doesn't even have to be switched on. An IP camera connects to the outside world through your broadband router. We explained how to do this in 'Networking for Beginners', *Shopper* December 2005, and we've included a copy of this feature on this month's cover disc.

To find out how easy this can be, we used the D-Link DCS-5300W. It is an expensive option at £259 including VAT, but unlike cheaper IP cameras it's wireless and has motors that move the lens around. As it's wireless, the camera can be positioned anywhere within range of your wireless network and not just a short distance from your PC's USB port or your router.



▲ We used the D-Link DCS-5300W for this project, which comes with its own surveillance software

The 5300W comes with instructions and PC software that enables you to incorporate it into your network. When it's set up, you simply open a web browser, enter the camera's IP address and a screen showing an image from the camera will appear, along with controls to pan and tilt it remotely. But we really want to be able to view this over the internet. Details differ from one broadband router to another, but the basic technique is to set up port forwarding on your router so that it knows to pass on requests to the IP camera. Then you can enter your router's IP address to view your home from anywhere in the world.

If your ISP offers dynamic rather than static IP addresses, this address will change from time to time. In this case, you need to use a dynamic domain name server. Take a look at www.dyndns.org, which provides a free service for home users. The camera also comes with dedicated surveillance software that, among other things, can send you an email if it detects movement.





PROJECT 3

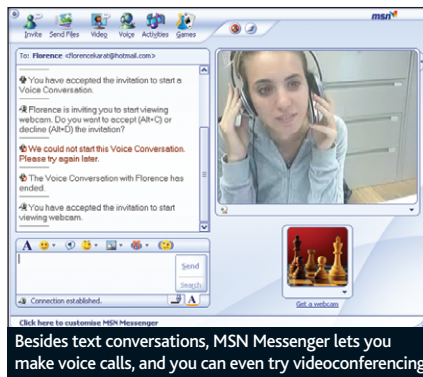
USE INSTANT MESSENGER

Dial-up subscribers have been using instant messaging for years to hold online text-based conversations, but broadband offers so much more. There are a number of different instant messaging programs, but three of the most popular are MSN Messenger, Yahoo! Messenger and AIM (AOL Instant Messenger). There are free programs, such as Trillion (www.ceruleanstudios.com), that allow you to track users on most chat programs simultaneously. The only exception to this is AIM, which is set up so that you can see and talk to other AIM users only within the program itself.

You can do some exciting things with chat programs. We've used MSN to show you how to use them, but most programs offer similar features. First you need to download the program from www.msn.co.uk/messenger. MSN has similar facilities to Windows Messenger, the chat program included with Windows. If you've not already used Windows Messenger or MSN, you'll be invited to subscribe to a Hotmail or other .NET Passport account as part of the installation.

Setting up MSN Messenger couldn't be much easier and you'll soon be chatting with friends, family and colleagues. The only pitfall you might suffer is if your firewall blocks certain ports. If this happens, you'll find that you can do some things in Messenger but other things – perhaps application sharing – might fail to work. If this happens, you'll need to reconfigure your firewall to allow each associated application access to the internet.

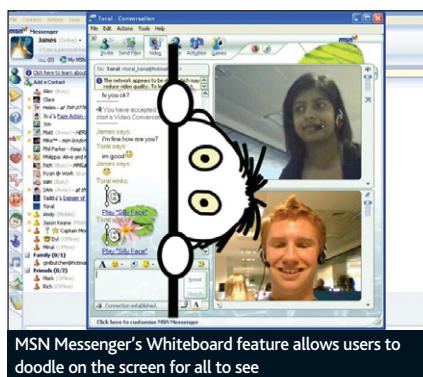
You can use MSN Messenger for text, but it's more fun to use it to make free voice calls, or even for videoconferencing. This is just the start. With MSN Messenger's Whiteboard feature you can draw on the screen, and the person you're chatting with will see your drawing immediately. What's more, you can both draw at the same time just as you would in a brainstorming session on a real whiteboard or flip chart. You can share files such as photos without the file size limitations that your email account might impose, and you can even share applications. For example, if you're working on a PowerPoint presentation and you want to get some feedback from a colleague, you can just start PowerPoint and tell MSN Messenger to share



Besides text conversations, MSN Messenger lets you make voice calls, and you can even try videoconferencing



Exchange photos and other large files without falling foul of the size restrictions that email accounts can place



MSN Messenger's Whiteboard feature allows users to doodle on the screen for all to see

that application. It will appear on your colleague's screen so he or she can provide feedback either by text, voice or video. Alternatively, you might choose to let them control the application so that instead of just telling you what changes they would be inclined to make, they can actually make the changes to the document.

process ensures that you get to see what you're interested in without being bogged down with extraneous information. Once set up, your reader will regularly show you the headlines of articles you might be interested in, and you simply click on them if you want to read them in full.

Apple has made a particularly interesting use of RSS feeds in the latest version of its iTunes software, which supports Podcasting. Unlike internet radio (see the column, right), podcasting isn't in real time so you can listen to programs whenever it's convenient for you. iTunes lets you monitor what programs are available on the stations to which you've subscribed and download the ones you'd like to hear. You can then upload them to your iPod and listen to them on the move just as you do with music tracks.

MINI PROJECTS

INTERNET RADIO

If you thought DAB radio was the latest thing, think again. With internet radio you can listen online to the output of traditional broadcasters such as the BBC (at www.bbc.co.uk/radio) as well as specialist radio stations that you won't find on the airwaves. To see what's out there, visit www.virtualltuner.com, which acts as a portal for internet radio stations. You'll find similar radio station guides in iTunes, Windows Media Player and many other media playback programs.



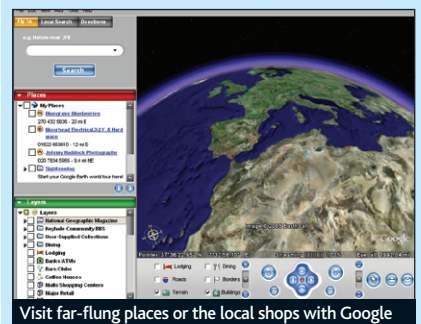
You'll find radio from all over the world on the web

VIDEO STREAMING

For the ultimate in cool, look no further than streaming video. If you're looking for news, pop videos, movie trailers or sports highlights, you'll find there's no shortage. For news go to http://news.bbc.co.uk/broadband/news_console.stm or www.cnn.com/video. For the latest pop videos try www.mtv.com. Visit www.videodetective.com for movie trailers and <http://home.skysports.com/broadband.asp> for sports news. Pay-to-view streaming video is starting to take off – see www.vod.com. Despite being illegal, it is fairly easy to find the latest episodes of TV programmes, for free, on the internet. Bear in mind that it is against the law, though, and that a lot of the places that share these files are riddled with viruses and spyware.

GOOGLE EARTH

If you're fascinated by the world around you, Google Earth (<http://earth.google.com>) will make compulsive viewing. Travel around the planet viewing the Earth either as a map or as a satellite photograph. Zoom in to see city centres at street level with individual buildings and places of interest marked. With Google Earth's elevation data you can even see the terrain in true 3D. Use it for educational purposes, to check out a possible holiday location or even to plan a route.



Visit far-flung places or the local shops with Google

PROJECT 4

ENJOY RSS FEEDS

Are you fed up with having to search the web constantly for elusive information and skipping from one site to another? Wouldn't it be better if the information could be presented directly on your desktop? This is where RSS feeds come in.

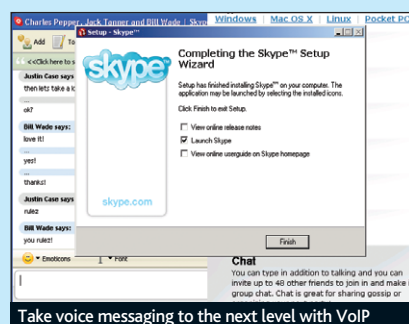
To use them, you need an RSS reader. There's no shortage of these, and most of them are free, but if you're just starting we recommend FeedReader from www.feedreader.com. This lets you choose which RSS feeds you want to subscribe to and presents them neatly on the screen. Each RSS feed covers a particular topic, so the subscription



REVISITED PROJECTS

VOICE OVER IP

We've already seen that instant messaging services include voice communication, but if you want to be able to communicate with anyone – not only those who use the same instant messaging service – you need a dedicated Voice over IP (VoIP) service. Often you'll find that advanced features such as SMS, voicemail and call divert are available and, increasingly, it will be possible to make calls to people on an ordinary landline or mobile phone. To find out more, including a runthrough of how to use the popular Skype VoIP service, take a look at 'Free Speech', *Shopper* November 2005.



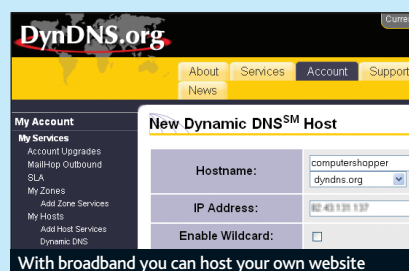
Take voice messaging to the next level with VoIP

VIRTUAL PRIVATE NETWORK

If you find that you constantly need to access your office network while you're at home, you need a virtual private network (VPN). This doesn't necessarily let you control another PC remotely as we discuss elsewhere in this article, but it does enable you to access files on a remote PC or network. And there are sufficient security features to keep your precious data safe from prying eyes. For full details on how VPNs work and how to set one up yourself, take a look at *Advanced Windows*, *Shopper* June 2005.

WEB HOSTING

With a broadband connection you could choose to host a website on your own PC rather than on your ISP's server. This might not be any cheaper than letting your ISP do it for you (as the service is often free), but it would be a great opportunity to learn about the technology involved in setting up a web server, and as your experience grows you'll be able to use lots of clever server-side technologies. If you fancy getting to grips with port forwarding, domain name servers and everything else, see 'Set Up Your Own Web Server', *Shopper* July 2005 for details.



With broadband you can host your own website

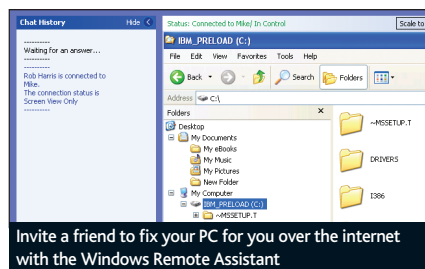
PROJECT 5

CONTROL YOUR PC REMOTELY

If you have a PC at home, one at the office and a laptop, making sure you have the right files in the right places can be a real headache. You could email yourself the files every morning and evening, or transfer them on a USB memory stick, but there will always be times when the latest version of a file is not where you need it. With a broadband connection, controlling one PC remotely from another gives you a great advantage.

Windows XP includes a facility called Remote Assistant. This doesn't let you control your PC from another location, but you can invite someone else to take the helm, which can be useful. Remote Assistance is a support function that enables you to ask someone you trust to help you out if you get into difficulties, but there are lots of other ways it can be put to good use.

To use Remote Assistant (which you should find in the All Programs section of the Start menu), first invite someone to assist you. The easiest way to do this is through instant messaging. Your would-be assistant is then told that you've invited him to use Remote Assistant and he must choose to accept that invitation. You can decide whether you want your assistant only to be able to see



Invite a friend to fix your PC for you over the internet with the Windows Remote Assistant

your screen remotely or whether you also want to allow them to take control.

If you want to be able to take control of your own PC from wherever you are, even if there's nobody at the remote PC to run Remote Assistant, you need a remote control service such as LogMeIn. To use it, download the software from <https://secure.logmein.com> on the PCs you want to be able to control and register to use the service. A free version of the software provides basic remote control facilities, while a Professional version (\$13, around £7, per month for one PC or \$10 per PC per month for two to 10 PCs) adds file sharing, local printing of remote files and the option to allow a guest temporary access to your PC. When you first sign up you'll get the full version, which you can use free for a month.

Once you've set up one or more PCs for remote control, you can log into www.logmein.com, choose which PC you want to control and enter a password. A window opens showing the status of your remote PC's screen, which you can control with the mouse and keyboard as if you were sitting in front of it. As the connection goes through LogMeIn's secure gateway rather than linking directly, you can forget about all the problems associated with configuring firewalls and routers.



With LogMeIn you can access your PC and its files securely from any other PC on the internet

PROJECT 6

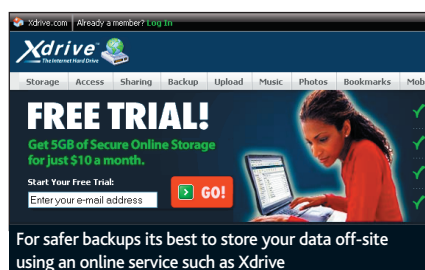
PERFORM ONLINE BACKUPS

If you back up your hard disk regularly, you've taken a major step forward in protecting your valuable data. But what do you do with your CDs, DVDs or tapes when you've made a backup? If you just leave them hanging around they might get lost or stolen, and unless you put them in a fireproof safe a fire could wreak havoc with your data security. You need an off-site backup, and internet-based backup services provide just that.

The idea is simple. When you initiate a backup, rather than writing the data to a local storage device such as a DVD drive, it's sent over the

internet to a remote server. With many of these services you can specify a backup schedule, and you don't have to remember to leave a blank DVD in your drive before finishing work for the day.

A couple of services you might like to try are Xdrive (5GB for \$10 per month) at www.xdrive.com and BackupMyStuff (2GB for £10 per month) at www.backupmystuff.com. Alternatively, you can use a utility called RoamDrive (www.roadmdrive.com) in conjunction with a Gmail, MSN or Hotmail account to use their free online storage for backup. See 'How To Use Gmail for Online Storage', *Shopper* October 2005 for more details. **CS**



For safer backups it's best to store your data off-site using an online service such as Xdrive



A cheaper option is to use the free web space you get with your Gmail or MSN email account and RoamDrive